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(12) **United States Patent**  
**Suzuki**

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(54) **MULTI-STATION TRANSMISSION METHOD AND RECEIVER FOR INVERSE TRANSFORMING TWO PSEUDO-ORTHOGONAL TRANSMISSION SEQUENCES USED FOR METRIC CALCULATION AND BASE STATION SELECTION BASED THEREON**

(75) Inventor: **Hiroshi Suzuki, Yokosuka (JP)**

(73) Assignee: **NTT Mobile Communications Network Inc., Tokyo (JP)**

(\*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 168 days.

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Primary Examiner—William Luther

(74) Attorney, Agent, or Firm—Connolly Bove Lodge & Hutz LLP

(57) **ABSTRACT**

In a multi-station transmission method and receiver using training signals, a forward signal is transformed in a signal transformation part to two pseudo-orthogonal transmission signal sequences, which are framed in base stations of two adjacent zones and augmented with orthogonal training signals, thereafter being transmitted over the same channels. A signal received by a receiver of a mobile station is separated, by a signal separation part using the training signals corresponding to the respective base stations, into signal sequences received from the respective base stations. The received signal sequences are subjected to an inverse transformation by inverse transformation circuits to obtain two transmitted signal sequences, and one of these signal sequences which has a larger metric is selectively outputted.

**8 Claims, 4 Drawing Sheets**

